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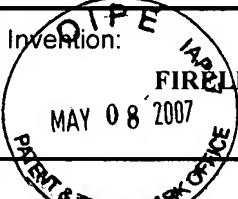
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## CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)

Applicant(s): Harp et al.

Docket No.

FIREPLACE

Application No.  
10/766,628Filing Date  
Sept. 30, 2003 (P)Examiner  
Carl D. PriceCustomer No.  
34534Group Art Unit  
3749

Invention:

FIRELIGHT REFLECTIVE SYSTEM AND METHOD

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## TRANSMITTAL OF APPEAL BRIEF (Small Entity)

Docket No.  
FIRELIGHT

Invention Of: Harp et al.

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/766,628	Sept. 30, 2003	Carl D. Price	34534	3749	

Invention:

**FIRELIGHT REFLECTIVE SYSTEM AND METHOD**COMMISSIONER FOR PATENTS:

## Reply Brief to

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:

December 6, 2006

Applicant claims small entity status. See 37 CFR 1.27

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Appl. Serial No. 10/766,628  
Reply Brief on Appeal

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
PATENT APPEALS DIVISION**

Applicant:	HARP <i>et al</i>	Docket Ref.:	FIREPLACE
Serial No.:	10/766,628		
Filing Date:	Oct. 14, 2003	Group Art Unit:	3748
Title:	FIRELIGHT REFLECTIVE SYSTEM AND METHOD	Examiner:	Carl D. Price

Commissioner of Patents  
Box Appeals  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY BRIEF ON APPEAL**

In response to the Examiner's Answer dated March 8, 2007, Appellant presents this Reply Brief regarding Appellants' appeal of the Final Rejection dated Sept. 19, 2006 (hereafter, "Advisory Action").

**I. REPLY ARGUMENT**

1. *Independent Claims 1, 11 and 17 (and those Claims Dependant Thereon) Are Patentable Over the Kasulis patent Pursuant to 35 U.S.C. § 102*

In the Examiners Answer, the Office fails to rebut that the Kasulis patent discloses a viewable surface 76 having a separate and different angular surface plane than viewable surface 78 which is not coupled substantially parallel to the side wall of the firebox. Indeed, the Office asserts that Claims 1 – 6 and 10 – 20 are “rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over” the Kasulis patent, the Shumaker patent, the Greenspan patent, the Pledger patent, the Butterfield patent, the Hisser patent and/or the Fleming patent (*see* Examiner’s Answer, p. 4). The Office asserts that “the claimed invention is anticipated by mirror reflectors (76, 86, 86, see figures 8 and 9) are arranged, attached and aligned parallel to three respective fireplace or firebox walls”. However, under Section 102, every limitation in the claim must exist in the Kasulis patent for anticipation to exist (not just one limitation). Here, the Office’s reasoning completely ignores the present claim recitation that the present invention is “adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox” as recited in Claims 1, 11 and 17 (a recitation that can never be achieved by the Kasulis patent), and therefore, the Office’s Section 102 analysis is without merit.

As such, because the primary reference relied upon by the Office (the Kasulis patent) fails to anticipate the rejected independent claims (*i.e.*, Claims 1, 11 and 17), and those claims which depend on these claims (*i.e.*, claims 2-10, 12 - 16 and 18 - 20), and because the Office does not appear to rely on any of the other six references to reject these claims under Section 102, the Appellant respectfully requests that any perceived rejection pursuant to Section 102 be overturned.

**2. *In the Alternative, Independent Claims 1, 11 and 17 (and those Claims Dependant Thereon) Are Patentable Over the Kasulis patent Pursuant to 35 U.S.C. § 103***

As seen below, the Kasulis patent fails to identify numerous recitations found in independent claims 1, 11 and 17, and instead, teach away from the present invention:

This is the rear interior surface of the Kasulis firebox.

This is the angled light reflective surface in Kasulis which plainly is not “measured to substantially fit within [a] pre-determined interior surface structure of the firebox” as recited in independent Claim 1, 11 and 17.

Further, because it is specifically angled away from the rear firebox surface, this reflector plainly does not “couple substantially parallel to [a] pre-determined interior surface structure of the firebox” as recited in independent Claims 1, 11, and 17.

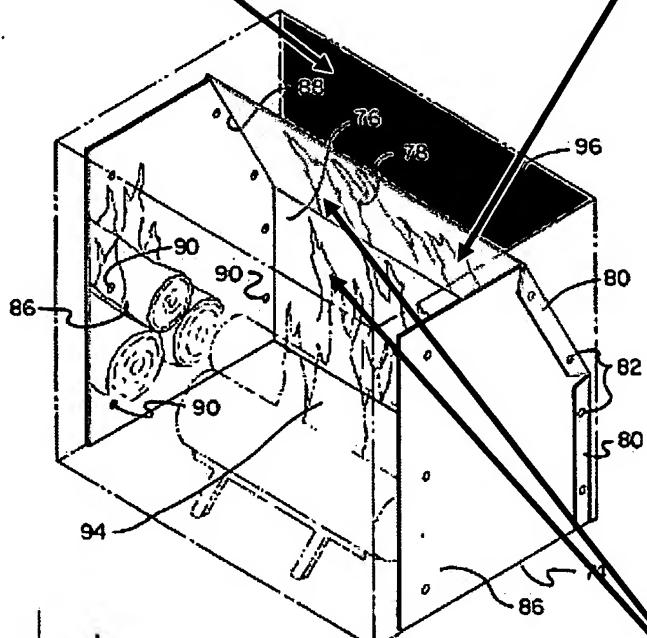


FIG. 8

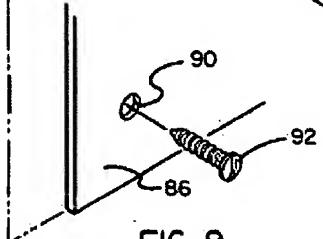


FIG. 9

Because reflector 78 is intentionally angled away from rear firebox wall 96, the simulated flames depicted on reflector 78 are of a different viewable orientation and angle of the simulated flames found on reflector 76, so that the Kasulis reference is not “adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox” as recited by Claims 1, 11 and 17 because reflector 78 is not coupled substantially parallel to the rear firebox surface.

As recently stated by the United States Supreme Court, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR International Co. v. Teleflex, Inc.*, 550 U.S. \_\_\_\_ (slip op. 2007). “Where the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *Id.*

It is clear that the Office has relied on the Kasulis patent as the primary basis for rejecting the pending claims but completely ignores that due to the angular orientation of reflector 78, the Kasulis patent fails to teach a system which is “adapted to provide a three-dimensional view consistent with the pre-determined interior surface of the firebox” as recited by Claims 1, 11 and 17. Again, in this case, the Kasulis patent expressly teaches away from the present invention because it requires viewable surfaces having “an orientation offset from the vertical within a fireplace” (see Kasulis patent, Abstract), so that the rear surface has a different angular position than the surface 78 (see Kasulis patent, Col. 5, l. 66 – Col. 6, l. 3). A reference teaches away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. *In re Gurley*, 27 F.3d 551 (Fed. Cir. 1994); *see also United States v. Adams*, 383 U.S. 39, 52, (1966) (“known disadvantages in old devices which would naturally discourage the search for new inventions may be taken into account in determining obviousness”); *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550-51 (Fed.Cir.1983) (the totality of a reference’s teachings must be considered); *In re Sponnoble*, 405 F.2d 578, 587 (CCPA 1969) (references taken in combination teach away since they would produce a “seemingly inoperative device”); *In re Caldwell*, 319 F.2d 254, 256 (CCPA 1963) (reference teaches away if it leaves the impression that the product would not have the property sought by the applicant). In this case, the rejected claims recite that each light reflective material is “measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace.” There is absolutely no disclosure in the Kasulis patent that its surfaces “substantially

fit” within the interior firebox because the Kasulis patent is expressly intended to have one of the major surfaces (elements 68, 78) be angled away from an interior surface of the firebox, and supported by brackets through a hinge, so that the angular position of these major surfaces can be angled differently away from or towards the firebox interior wall through a series of dials 44 (see Kasulis patent, Col. 5, ll. 51-57) for heat reflection (Col. 7, l. 15-17). The express reliance on such dials to move the interior viewable surface away from the firebox’s interior chamber in the Kasulis patent evidences that Kasulis was “led in a direction divergent from the path that was taken by the applicant”. *See In re Gurley*, 27 F.3d 551 (Fed. Cir. 1994). As such, the Kasulis patent expressly teaches away from the present invention.

Moreover, as stated by the U.S. Supreme Court, obviousness can be proven where the Office shows that “there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims”. *Id.* The Federal Circuit has stated that in reviewing prior art under Section 103(a), the Office must cast its “mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field.” *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356 (Fed. Cir. 2006). Here, the Kasulis patent identifies a specific problem of low heat transfer from the flames in the firebox, which is solved by (according to Kasulis) moving the upper angled mirror (element 78) away from the rear firebox surface through a series of dials for the purpose to reflect heat (see Kasulis, Col. 7, l. 15-17). Pursuant to the Supreme Court’s mandate, the Office cannot show that the Kasulis patent was concerned with providing “a three-dimensional view consistent with the pre-determined interior surface of the firebox” (as recited in independent Claims 1, 11 and 17) because the Kasulis patent was expressly concerned with reflecting heat. Thus, the Office cannot prove obviousness.

While the Kasulis patent is the primary basis for rejecting the pending claims under

Section 103<sup>1</sup>, the Office appears to rely sporadically on the six other references (the Shumaker patent, the Greenspan patent, the Pledger patent, the Butterfield patent, the Hiser patent and/or the Fleming patent - see Examiner's Answer, p. 4) to fill the gaps not taught by the Kasulis patent. However, the U.S. Supreme Court recently solidified the position that the Office "should be aware ... of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *Id.* (italics in original). As articulated by the Federal Circuit, "[i]t is impermissible ... to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps. *In re Gorman*, 933 F.2d 982 (Fed. Cir. 1991) ("The references themselves must provide some teaching whereby the applicant's combination would have been obvious."). Here, the Office provides no reason or motivation as to why any of the other six prior art references can be combined with the Kasulis patent. Indeed, the Office relies on statements within each cited patent<sup>2</sup> which have absolutely no bearing on the recitations of independent claims 1, 11 and 17. The Office then concludes "since each reflective panel of [the Kasulis patent] displays an image to a viewer that is located within the vertical surfaces, the reflective panels of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems". See Examiner's Answer, p. 8. However, such claim recitations of "angles of incidence" or "angles of

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<sup>1</sup> Due to the way the Examiner's Answer is written (e.g., without subject headers), it is difficult to determine exactly what combination of the prior art is being used by the Office to reject specific claims in the pending application. In this regard, the Applicant expressly moves the BPAI to have the Office Provide a More Definite Statement as to which prior art combinations are being used to reject which specific claims in the pending application.

<sup>2</sup> E.g., "All conventional planar reflectors follow the well known optical law of reflection which, simply stated, is that the angle of incidence on a reflector is equal to the angle of reflection from the reflector" from the Greenspan patent; "Following the basic law of mirrors (the angle of incidence equals the angle of reflection" from the Shumaker patent; "the mirror reflects the beam according to the law of mirror reflection" from the Pledger patent; etc. See Examiner's Answer, pp. 6 – 8. The Office acknowledges that these arguments are without merit in the Answer (see Examiner's Answer, p. 12 - "The Examiner must however note that the present amended claims no longer include, and therefore are not limited to or defined by"), but nevertheless includes such arguments without explanation.

reflectance" are not found in any of pending claims 1, 11 or 17. And, the Office also concludes that since the Kasulis patent "displays an image to a viewer that is located within the vertical surfaces, the reflective panels of [the Kasulis patent] being oriented parallel to the wall of a firebox, would necessarily and inherently, have an angle of incidence and an angle of reflection which are both substantially equal". Again, there are no such claim recitations in pending claims 1, 11 or 17, so that it is difficult to respond to the Office's reasoning found on page 8 of the Examiner's Answer.

Because the Kasulis patent requires a viewable surface having "an orientation offset from the vertical within a fireplace", the Kasulis patent can never achieve the limitation of a reflective material which is substantially parallel to the interior surface of a firebox or fire chambers as recited by the present claims, thereby maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber. This factual conclusion is evidenced by the affidavit of Dr. Yashvinder Sabharwal. *See In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1532 (Fed.Cir.1988) ("Evidence that supports, rather than negates, patentability must be fairly considered."); *see also In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1132 (Fed.Cir.1994). While the Office disagrees with the conclusions of Dr. Sabharwal, the Office acknowledges that it cannot provide any other evidence which would rebut the testimony of Dr. Sabharwal. *See* Examiner's Answer, p. 12.

Because the Kasulis patent expressly teaches away from the present invention, because the Office fails to identify how one of skill in the art would combine the Kasulis patent with the remaining six patents to achieve the present invention, and because factual evidence concerning nonobviousness has not been rebutted by the Office, the Appellants respectfully request that the Section 103 rejections to independent claims 1, 11 and 17 (and those claims dependant thereon) be overturned.

3. **Dependent Claims 8 and 9 Are Patentable Over the Kasulis patent in view of Japan disclosure 2003-79507 Pursuant to 35 U.S.C. § 103**

In the Examiner's Answer, the Office reasons that since Claims 8 and 9 incorporate all of the limitations found in the claim dependant thereon (*i.e.*, Claim 1), that rejection of these claims is appropriate. This reasoning is without merit. If the Office were to have rejected independent Claim 1 under Section 103 over the Kasulis patent in view of the Japan disclosure, then the Office's reasoning that dependant claims 8 and 9 can be rejected because they incorporate all of the limitations of independent Claim 1 would be accurate. However, the Office has never asserted a Section 103 rejection of independent Claim 1 over the Kasulis patent in view of the Japan disclosure. As such, the Office's position in its Answer Brief is without merit, because dependant claims cannot, by themselves, be subject to a separate Section 103 rejection without having the parent claim (*i.e.*, the claim upon which the dependency arises) also be rejected. Moreover, while the Applicant provided numerous Federal Circuit case law in its opening brief to support its position, the Office fails to identify even a single case which supports its reasoning – such a case doesn't exist, and there is a reason why it doesn't exist. Namely, because Claim 1 is an independent claim, it is by definition broader in scope than dependent claim 8 and dependant claim 9. If Claim 1 is allowable under Section 103 in light of the Kasulis patent in view of the Japan disclosure, it necessarily stands that dependant claims 8 and 9 must also be allowable under Section 103 because claims 8 and 9 recite further limitations than Claim 1, and by definition, are necessarily narrower in scope than Claim 1.

Again, for the Appellant to discuss the Office's improper Section 103 combination of the Kasulis patent and the Japan reference as to dependent claims 8 and 9 would result in forcing the Appellant to create unnecessary and unwarranted prosecution history arguments, which may later be detrimental and highly prejudicial to the Appellant should litigation arise as prosecution history estoppel. As such, Applicant reserves the right to discuss any Section 103 rejection based upon the Kasulis patent in view of the Japan disclosure when a meaningful rejection is

asserted by the Office.

In sum, because the Office has failed to identify any case law supporting its position that dependent claims can be rejected under Section 103 without rejection of the claims upon which the dependency arises, and because “[w]hen independent and dependent claims have been argued together, the validity of the latter stands or falls with that of the former” (*Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888 (Fed. Cir. 1984)), the Appellants respectfully request that the rejection of independent claims 8 and 9 pursuant to Section 103 over the Kasulis patent in view of the Japan reference be overturned.

### VIII. CONCLUSION

It is respectfully submitted that in view of the foregoing, and in light of the deficiencies found in the Examiner’s Answer, all of the pending claims are patentable over the cited prior art references, whether alone or in any combination, and the Board is respectfully requested to overturn all rejections of record and allow this application to issue.

Dated: May 8, 2007

Respectfully submitted,

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